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Information Systems Project Management

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CHAPTER *1*

Information Systems Project Management
Overview:

INTRODUCTION: *Management Information Systems.*

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Information systems have plays important role into management of contemporary enterprise: from small-, medium-, or large-scale; a profit making or social- service set-up; private or pubic undertaken; manufacturing, creative, or service oriented venture; a local or global organization.

Management Information Systems (or MIS) content with process of managing information strategic resource to improving organizational performance for developing strategies and introducing systems and controls the information quality over time. Management information systems processing of information several management levels in organization; both, perusing goals particular organization level. Information and Communication Technology for Government.

(Artur & Emilija, 2016)

The role of Information Systems Project Management

Introduction

Information systems project managers concerned and coordinating resources project management. Project management culture all its own, require high degree of flexibility and dealing with uncertainty, indefinite, complexity or inadequate authority, situations that arise and employee relationships. Authority of information system project manager vary from executive responsibility line management sense to coordinator by persuasion. The control over budgets, personnel, etc., vary from project to project. His responsibility may divided up geographically between locations. Information systems project manager project include: (John & Trevor, 2003)

- Visioning, objectives and developing goals;
- Planning the project and optimizing effectiveness
- Analyzing, monitoring, estimating and forecasting future states conclusion of the project.
- Directing, leading, commanding or controlling course project.

Management term come from the idea handling (the Latin manus meaning hand) therefore controlling things. Leadership derives from the Anglo-Saxon word for *path,* concept of movement, direction, and change, added traditional people-oriented concepts, team membership and example. We used words *manager* and *management* because of their wide acceptance, in the project environment, world leader and leadership are also synonymous.

Information systems project manager provide leadership to secure people and groups from different departments, companies and ethnic cultures and form into a single, coherent team. Manager must ensure project completed on time within budget.

(John & Trevor, 2003)

Manager accept personal responsibility and accountability for project, this

prerequisite for success of such undertakings. The information systems project

manager is project gives exposure at area of business, example, investment,

funding, appraisal, execution and design, planning and control.

Dawson (1988) written *Analyzing Organizations* identified the attribute of managers.

Table 1.1 below can be used to construct profile information systems project manager.

Table 1.1 Information Systems Project Manager	Basic Job Components
1. Task	Manager project resources
2. Method	Direct and controlling
3. Technology	Computer software project tools
4. Variety	Moderate to high
5. Sequencing	Substantial latitude
6. Timing	Open (project-dependent)
7. Pace	Self-determined and motivated
8. Quality	Usually predetermined
9. Specialization	Moderate to low
10. Interdependence	High
11. Partialness	Whole project
12. Performance	Time within budget
13. Monitoring	Project board/committee
14. Accountability	Project reporting and interview

The list 1.1 illustrates task and decisions need to deal with as project enters it stages.

The checklist is some of the practical skills, characteristics and knowledge associate

competent project manager.

Role of the information systems project manager

The project manager should possess ability to see total (or big) picture. The

effectiveness of project managers recognize factors can affect outcome of project.

Project manager should not only consider technical aspects but also economic, legal

(John & Trevor, 2003)

aspects and personnel. With broad perspective, seeing whole picture, taking system approach. Person argued that some project manager don't have the characteristic. They emphasizing the technical side and neglecting important areas. Relationship with sponsor or client can deteriorate. That lead to complication to lack of compliance with contract and project team suffer high staff turnover.

Information system project managers and systems personnel should educated to carry out responsibilities in environmental that is devoted. Project manager should sometime focus less on technology and more attuned to softer skill set. Software projects implications for skills require all systems professionals. Many still make determined effort shake off traditional image, which perceived by sponsors and clients as obstructive. In the pass, skill learned by apprenticeships or through experience at some time making mistakes. This approach slow and inefficient compared to program that have specific learning, with complexity is involved. Information systems project managers or from many different backgrounds bring broad range of skill to the job.

Leadership

The companies with technical and economic progress many information technology organizations brought significant need for effective leadership. Leader are to be trained effective than solely developed through experience, The question what must the leader *be* but rather what the leader *do?* Information system project manager's job to instruct, direct, and encourage motivate members of staff or team (and external personnel). The person must committed successful completion of project. Individual project manager foster a great lengths of team approach actively engaged into the project. Manager should motivate member of each team pursue same aims. John Adair (1990) in *Understanding Motivation* identified six functions associated with leadership: (John & Trevor, 2003)

1. Planning: seeking available information; defining group tasks or goals; making a working plan.

2. Initiating briefing the group, allocation tasks; setting group standards.

3. Controlling: maintaining group standards; ensuring progress towards objectives; prodding actions and decisions.

4 Supporting: expressing acceptance of individual contribution; disciplining and encouraging; relieving tension with humor; creating team spirit; reconciling disagreements.

5 Informing: clarifying task and plan; keeping the group informed; receiving information from the group; summarizing ideas and suggestions.

6 Evaluation: checking feasibility of ideas; testing consequence; evaluating group performance, helping the group to evaluate itself.

This leadership developed by Professor Adair, many organizations used this model leadership approach:

Adair's identifying the three components of leadership (objective, team, and individual) as insisting they are interdependent Figure 1.1 show below:
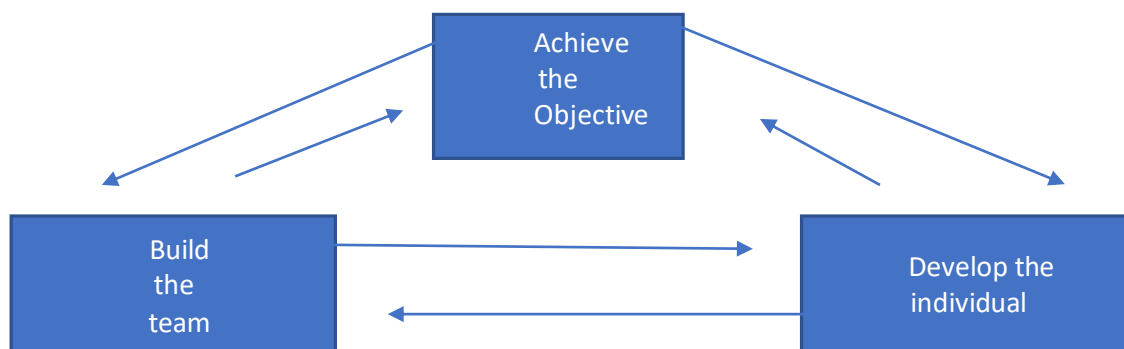

Figure 1.1 Leadership interrelationship functions

The trademarks of outstanding leaders they are attentive to the needs of people. The year 1992 Don Phillips view the President Lincoln was a leader that other leaders could learn a lot from. Phillips regards Lincoln the greatest leader the US, perhaps this world, has yet know.

Lincoln understood the concept of management. His personal secretaries, Hay and Nicolay, noted Lincoln see many people often as possible and reported Lincoln spent 75 percent of is time with people. He was one of most chief executive accessible US have ever know. Phillips noted, Lincoln called on congress regularly and the first president in years to attend regular working session of the Senate. Lincoln frequent add human contact was essential in creating a commitment, collaboration, and community. Leadership in context of doing right thing, Cleland (1998) identified a number of issues which information systems project manager must concerned.

First issue is identification, communication and development of vision for project stakeholders who leader wishes to lead. The project stakeholders is members of a project team other principles in political, economic, social, and technological (PEST), and environments in which project exits.

Second issue the project leader to identify resources be needed to realize the vision. The project manager designs series of initiatives aimed acquiring resources and ensuring support project and organization.

Third issue is conceptualization and designation of project's organization design to align people and resources facilitate accomplishment of vision.

Fourth and final issue gaining commitment of stakeholders to support project manager's in attainment of vision. A commitment to project vision require project manager find means processes that foster environment with team members is motivated to work towards the vision. Is an ongoing journey keeping people loyal to vision, constantly attainment even during period of adversity.   (John & Trevor, 2003)

Managing in the Digital World

Information Systems Today: (Valacich Christoph, 2018)

Information systems (IS) ubiquitous: Tradition desktop computers, smartphones, laptop computers, tables name it; information systems all around us, whether you see it or not. UPS and Fedex use information systems for route trucks and track packages. Walmart and Walgreens use information system for everything from optimizing supply chains to recording purchases and analyzing customer tastes and preferences. Cities use information systems for traffic control systems or variable speed limits. Information systems use in cars for everything to ignition control, airbags to distance control and park assist systems. Many business models, from Airbnb to Uber, Build on information system. Like schools and work place. At school, you register online for classes; use e-mail, Facebook, or Twitter for communication with students and instructors; access e-books form library; and complete or submit assignments online learning platforms for Blackboard, Moodle, Canvas, or Sakai. People use PC for checking e-mail and other tasks. Paycheck are generated by the computer and automatically deposited into bank account via high-speed networks. People use social networking sites like Facebook so that they can connect with family and friends, you can watch movies or videos on YouTube, pictures can be uploaded to you smartphone and sharing picture sites example Instagram, listen to music, playing games, Your smartphone also use to sending e-mail, or reading books. Every year you see information systems as never before, The systems are fundamental and important to social, academic and work place than ever before.

The Emergence of the Digital World

Pass decades, powerful, inexpensive, easy-to-use computers has major on society and business. You can see why information systems is so important. The global

competitiveness force companies to find better ways to do things less expensively. Many companies of firms continues to use information systems to do things faster, better and cheaper. Organizations use information systems to support business models, or build entire business models around information technology. Telecommunications networks, companies can easily integrate operations access new markets their products and services as well access large pool of talented labor in countries lower wages. This digital world into which we are living. The mobile devices like smartphone or tables, people have argued that we are living in the post-PC era, where wire-less, mobile devices is going to replace traditional desktop and computers. Last quarter 2021, Apple sold more iPads than HP (traditionally one of world's leading PC markets) sold PCs, the United States, and smartphone penetration reached 82 percent (Nielsen, 2016). Creating a consumer devices, tablets become commonplace in various profession setting in warehouses, airplane cockpits, showrooms, and hospitals (Figure 1.2).

Figure 1.2 Mobile devices increasingly used in various profession setting.

The PCs desktop and laptops likely to go away. Mobile devices complement traditional computers, providing devices for different users and different tasks, service and data provided are primary importance.   (Valacich Christoph, 2018)

The changes in technology enabled new ways working and socializing; traditionally, people who bound to stationary PC for doing essential tasks, can perform tasks almost anywhere once they have a cell phone signal. Workplace traditionally have clear starting and clear ending, when powered your computer on when turned it off at night. Today tasks (like casual tasks as reading or browsing Web, sending or receiving e-mails) can done at any time, such as shopping in the supermarket.

Devices like smartphone or tablets, paired with mobile broadband networks, allow instant-on computing experiences, whenever and wherever ; *cloud computer* (Gmail, Dropbox, or Office Online) allow accessing file, e-mail, notes, and from different devices, enhancing portability and mobility.

Knowledge Workers and the Knowledge Society.

Year 1959, Peter Drucker predicted information and information systems would increasingly important, more than half century ago, he coined it term knowledge worker. Knowledge workers typically professionals relative educated who create, modify, and/or synthesize knowledge as fundamental park of their jobs.

Drucker's predictions were accurate about knowledge worker. They generally paid better than prior agricultural and industrial counterparts; they relay and empowered by formal education, also possess real-world skills; continually learning to do a better jobs, they have career opportunities and bargaining power than other workers ever before. Knowledge worker make up about quarter of workforce in United States and also other developed nations, number are rising quickly.

Drucker predicted that, growth in number of knowledge workers and rise in importance of education and learning to knowledge workers and firms that need them, education become cornerstone of knowledge to society. Possessing knowledge, as important as possessing land, labor or capital. (Figure 1.3) research shows people equipped to

prosper in knowledge society, like people with college education, earn for more average than people without a college education, the gap is increasing.
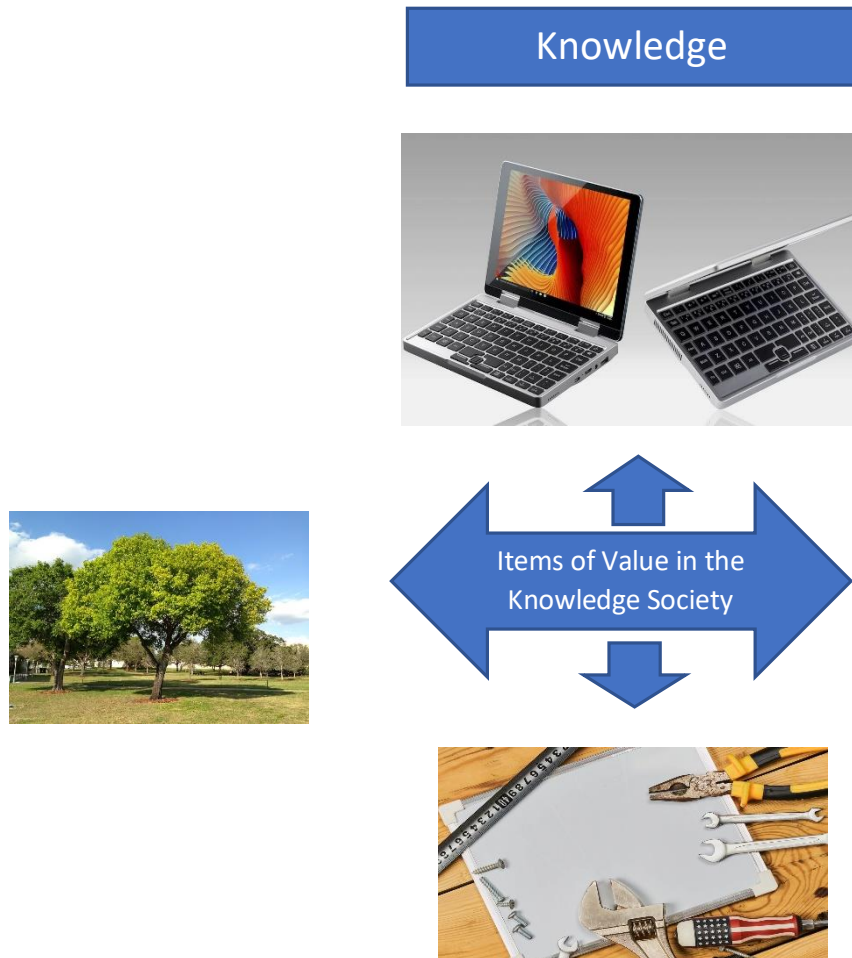

Figure 1.3 Knowledge become important as—many feel important than—land, labor and capital resources.

In fact, recent data from U.S Census Bureau's American Community Survey (2014 data) reinforce value college education: Median earnings for workers 25 and over with bachelor's degree were US $50,450 a year, those workers with a high school diploma were US$27, 809.Median earnings worker with graduate or professional degree were US$66,175, and without high school diploma US$20,542.

The data suggest bachelor's degree worth US$1 million additional earnings compared to worker with only high school diploma. Getting a college degree quality you many jobs that would not available to persons that does not have a degree. Having a college requirement can qualify you a career advancement and promotion opportunities once you get the job.

In our society, not only knowledge workers use information systems in our work lives; "traditional" occupations use information systems UPS package delivery person use global positioning system (GPS) technology take best route to deliver parcels to farmer in Iowa who precision agriculture to use fertilizers increase crop yield. Almost every organization can be a e-business. The **e-business is** organization that used information technology or systems support every part of business.

(Valacich Christoph, 2018)

The Digital Divide

Person argued, that downside of knowledge worker and living in digital world. Example, some argued that knowledge worker will first replaced automation with information system. Some say the new economy is a **digital divide**, those with information systems have better advantages over those without access information systems. Digital divide one major ethical challenges facing society today when consider strong linkage between computer literacy and person's ability complete in digital world. Example, having the access raw materials and money fueled Industrial Revolution, "information society, fuel, power, is knowledge," by John Kenneth Galbraith, American economist specialized in emerging trends in U.S. economy. A new class structure divided those information and those function out of ignorance. "The new class power not from money, not from land, but from knowledge" (Galbraith, 1987).

Globalization: Opportunity and Challenges.

Organization and globalization open many opportunities, brought falling transportation and telecommunication coasts. Shipping wine from Australia to Europe costs a few cents, person can voice or video calls across the globe free when using Skype, Google Hangout, or WhatsApp. Large extent fueled movies, television, and forms of media, increasing globalization moved cultures closer together. Movies streaming provider Netflix available almost in every country in the world, people all corners of world receive television programming from other countries, major movies increasingly international. Rapid rise in the new middle class developing countries enabled companies to new markets, enabling to sell products literally millions new customers. Communication costs decrease, companies now can pull from a large pool of skill professions across the globe. Countries like China, Russia, and India offer high-quality education, leading an supply well-trained people at low cost. Counties build industries around competencies, like software development or tax preparation in India and call centers in Ireland.

The decrease in communication costs increased used of outsourcing moving business process or tasks (manufacturing, accounting, or security) to another country or another company --- companies can outsource business processes on global scale. Figure 1.4 companies choosing outsource business activities for various reasons: important reasons is as following (King, 2003):

1 To reduce or control cost
2 To free up internal resources
3 To gain access to world-class capabilities
4 To increase the revenue potential of the organization
5 To reduces time to market

6   To increase process efficiencies

7   To be able to focus on core activities

8   To compensate for a lack of specific capabilities or skill

**Figure 1.4 below company using talented workers or reduce costs.**

Companies in countries like India provide certain services cheaper because labor cost is low, or companies perform certain function in different country to lower cost or skilled labor. Example, India two companies – Wipro and Infosys – have emerged as leaders providing IT services from business consultant to system development. Addition, wide variety of services – from telephone support tax returns – candidates outsourcing different countries, Ireland, Chain, or India. Highly specialized service, like X-ray skilled radiologist, outsourced by U.S. hospitals to doctors around the globe.

Societal Issues in the Digital World.

Rapid development in transportation and telecommunication technologies, national and global infrastructures, and information systems well a host of factors created number of society issues tremendously influence in the world that we live in (PWC, 2016; Schreiber, 2016). Figure 1.5. One issue **demographic changes---** changes the structure in populations related as age birth rates, and migration.

Figure 1.5. Societal issues in the digital world.
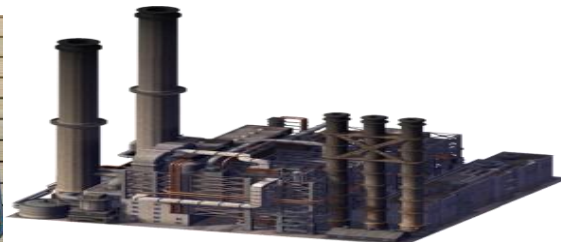
While countries in world developed rapidly aging populations, developing like Africa rapidly rise in population, fueling massive population global growth. The demographic changes shift balance demand and supply of labor; further, differences welfare likely to increase in the further. Countries already experience both positive and negative effects mass migrations. Many regions around the world seeing rise in **urbanization** movement rural populations urban areas, where 50 percent world population are now living in cities (PWC, 2016); with the growth providing livable environments pose challenges. Another major global **shifts in economic power** --- changes in countries' purchasing power and Control over natural resources ---- economies are losing dominating positions in the World's economy, resulting need resolve political struggles.   (Valacich Christoph, 2018)

Information Systems as a Domain   (Steve, 2002)

The demand organization business is for "systems" show objective in term of cost,

effectiveness, efficiency, or more typically, all three. The system developers provide low cost solutions perceived business problems. Information system management design, development and management technological identified solutions problems. Information system management pursued predominantly technical endeavor, has to work into a given social framework. Information systems study and practical application been given the attention: Information systems development (ISD).

(Steve, 2002)

From Technology – Based to Human – Centered Approaches

The technology – based approach

Design and development of the information systems (IS) has traditionally dominated technical, problem solving approaches, information systems developers typically achieved by including user analysis stage with existing problem approach. Inherited from computer systems development, relied on systems development life cycle (SDLC) primary method.

> The systems development life cycle
>
> Feasibility study
> User requirements specification
> System specification
> System design
> Testing
> Implementation
> Maintenance

Systems development life cycle stagewise or waterfall method, each of the stage undertaken linear sequence, generally requiring completion stage before next is commenced. Example, system design will not authorized until specification system was written and approved. User requirements fits specification in this process, the requirements seldom fixed but vary over life of the project. The developers demonstrate

degrees success in coping with this, many adept at accommodating user-prompted changes.

The early 1990s, where waterfall model identified the basis majority of information systems developments. The number of methodologies adhere the principles, which information systems development perceived large technology—based, engineering task, problem, approaches geared to engineering best solution meet the requirement specification know or anticipated constraints.

The systems development life cycle emerges, implicitly or explicitly, prime element, in Methodology adheres to function engineering model, structured, problem-solving approach: human complexity system is as something that can analyzed towards a specification can be written. Beath and Orlikowski (1994) interaction between user and systems professionals in IS, concentration, commitment, user participation revealed ideological rather than actual, user shown passive rather than active participants in the process. They see systems development methodologies containing "incompatible assumptions role of users and IS personnel during systems development".

(Steve, 2002)

CONCLUSION

Information systems project are different and they have distinctive characteristics, these elements are common but a few. Like organizing, planning, and controlling. The project management methodologies process of starting up project expects existence of a project mandate in high level terms reason for project and outcome is sought. Mandate for a project, a project described as; document consisting of mission statement, purpose and benefits, including background, objective, and goal. A project charter documents a definition of the project the order to bring the project term necessary agreement.

The project should clearly described project mission. Successful projects strike balance among customer and stakeholders.

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